

SLEEP STATE CLASSIFICATION

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ABSTRACT OF THE DISCLOSURE

Systems and methods for sleep state classification involve detecting
10 conditions related to sleep, including at least one condition associated with rapid eye
movement (REM) sleep. Additionally, a condition modulated by the sleep-wake
status of the patient may be detected. A medical system that is partially or fully
implantable incorporates sensors and circuitry for detecting and processing the
sleep-related signals. A sleep state processor classifies the patient's sleep state
15 based on the sleep-related signals. Sleep state classification may be used in
connection with the delivery of sleep state appropriate therapy, diagnostic testing, or
patient monitoring.